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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,046	10/24/2003	Chen Kwang-Tsan	MIDWAY-611 (4536*95)	1554

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EXAMINER

HAMO, PATRICK

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,046

Applicant(s)

KWANG-TSAN, CHEN

Examiner

Patrick Hamo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This action is responsive to amendments filed December 1, 2006.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rozek, 5,890,879, in view of Jamieson, 5,016,669, further in view of Rozek 5,213,025, and further in view of Yoshii et al., 6,022,199.

Rozek '879 discloses the invention substantially as claimed, including the following: a motor 13 with a shaft 14; the shaft mounting a crank or connector (see figure 2, between reference characters 13 and 18) eccentrically mounted to the shaft, the connector attaching to a piston 19; a cylinder 25 in which the piston operates (column 2, lines 23-24 and 29-31), the cylinder including inlet and outlet ports at its head (column 2, lines 23-25), which constitutes a closed end, and the piston being inserted into the cylinder in an open end opposite the closed end; a cover 29 longitudinally mounted on the cylinder head with inlet and outlet fittings (column 2, lines 31-32) that extend through the cover to the valve head member 27.

Rozek '879 does not disclose the following limitations taught by Jamieson: a valve assembly comprising two flapper valves 30 disposed between parallel plates 14 and 16 for the control of fluid inlet and discharge (column 1, lines 4-6). The upper plate 14 has an inlet port 18 and the lower plate 16 has a discharge port 20, and both plates have voids 22 formed for the flow of fluid. On these voids are ramped surfaces 28 that

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restrict the movement of the valves. Plate 16 may be set in a cylinder in confronting relationship to a piston, in which case the first flapper valve (30, to the right in figure 1), bends down onto the ramp surface (28, to the right in figure 1) as the piston withdraws from the valve assembly, allowing fluid to flow into the cylinder. As the piston reverses direction and moves toward the valve assembly, the negative pressure will cause the second flapper valve (30, to the left in figure 1) to bend onto the second ramp surface (28, to the left in figure 1), opening port 20 and allowing fluid to be discharged out of the piston cylinder.

The claimed limitation that the valve sheet is sandwiched between the closed end of the cylinder and the cover is considered to be a matter of obvious engineering choice. It would be obvious to make the upper plate and lower plate of Jamieson integral with the cover and closed end of the piston, respectively, thereby sandwiching the valve mechanism between the two. Therefore, this limitation fails to patentably distinguish over the prior art. See MPEP § 2144.04(5)(b).

Rozek '879 does not disclose the following limitations taught by Rozek '025: a piston rod with a cup seal 74 at the distal end of the piston. Rozek '879 discloses that the piston rod of Rozek '025 can be combined with the air compressor of Rozek '879 (column 2, lines 23-27).

In regards to the claimed limitation that the valve sheet comprises a U shaped first flapper and second flapper, Yoshii teaches a valve sheet with U shaped or tongue-shaped valves 27a(28a) corresponding to similarly shaped intake and discharge holes

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29b(30b) and 3b(5b) formed as die-cuts to ease the assembly of a cylinder block (Yoshii, column 1 line 64 – column 2, line 6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Rozek '879 with Yoshii to simplify assembly (Yoshii, column 1, line 65 – column 2, line 6).

Response to Arguments

It is noted by the Office that the Applicant made no arguments against the rejections made in the prior Office Action.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER